K W

PCT09

RAW SEQUENCE LISTING   DATE: 08/30/2001
PATENT APPLICATION: US/09/701,711   TIME: 07:37:03

Input Set : **A:\seqlist.txt**
Output Set: **N:\CRF3\08302001\I701711.raw**

ENTERED

```
 4 <110> APPLICANT: Vinals-Bassols, Carl
 6 <120> TITLE OF INVENTION: Novel Compounds
10 <130> FILE REFERENCE: BM45324
12 <140> CURRENT APPLICATION NUMBER: US 09/701,711
13 <141> CURRENT FILING DATE: 2000-12-01
15 <150> PRIOR APPLICATION NUMBER: PCT/EP99/03822
16 <151> PRIOR FILING DATE: 1999-05-31
18 <160> NUMBER OF SEQ ID NOS: 10
20 <170> SOFTWARE: FastSEQ for Windows Version 4.0
22 <210> SEQ ID NO: 1
23 <211> LENGTH: 2442
24 <212> TYPE: DNA
25 <213> ORGANISM: Moraxella catarrhalis
27 <400> SEQUENCE: 1
28 atgcgtaatt catattttaa aggttttcag gtcagtgcaa tgacaatggc tgtcatgatg     60
29 gtaatgtcaa ctcatgcaca agcggcggat tttatggcaa atgacattac catcacagga    120
30 ctacagcgag tgaccattga aagcttacaa agcgtgctgc cgtttcgctt gggtcaagtg    180
31 gtgagcgaaa accagttggc tgatggtgtc aaagcacttt atgcaacagg caatttttca    240
32 gatgtgcaag tctatcatca agaagggcgt atcatctatc aggtaaccga aaggccgtta    300
33 atcgctgaga ttaattttga gggcaatcgc ttaattccaa aagaaggtct acaagaaggg    360
34 ctaaaaaatg ctggcttagc tgtgggtcaa ccactaaaac aagccacagt acagatgatc    420
35 gaaaccgagc ttaccaatca atatatatca caaggctatt ataataccga aattactgtc    480
36 aaacagacga tgcttgatgg taatcgtgtt aagcttgata tgaccttgc tgaaggtaaa    540
37 cctgcacggg tggttgatat taatatcatt ggcaatcagc attttagcga tgcagatttg    600
38 attgatgtgc ttgcgattaa ggataataaa atcaatccac tgtctaaagc tgaccgttat    660
39 actcaagaaa agctggtgac cagtttagag aatttgcgtg ctaaatatct caatgcaggg    720
40 tttgtgcgtt ttgagattaa agatgctaag cttaatatta tgaagataa aaaccgtatc    780
41 tttgttgaga tttcattgca tgaaggtgag caatatcgct ttggacagac acagtttttg    840
42 ggtaatttaa cttatactca agcagaactt gaggcactgc ttaaattcaa agcagaagaa    900
43 gggttttcac aagccatgct tgagcaaaca acaaacaata tcagtaccaa atttggtgac    960
44 gatggctatt attatgctca aatccgtcct gtaacacgca ttaatgatga aagtcgtacg   1020
45 gttgatgtgg aatattatat tgaccctgta caccctgtct atgtacgccg tattaatttt   1080
46 acaggtaact ttaagaccca agatgaagta ctccgtcgtg agatgcgaca acttgaaggt   1140
47 gcgttggcat ctaatcaaaa aatccagctg tctcgtgcac gcttgatgcg gactgggttt   1200
48 tttaaacatg ttaccgttga tactcgtcca gtacccaact cacctgatca ggttgatgta   1260
49 aatttttgtgg ttgaagaaca accttcagga tcatcaacca tcgcagcagg ctactctcaa   1320
50 agtggtggtg taacttttca atttgatgtt tctcaaaata actttatggg tacaggtaag   1380
51 cacgtcaatg cttcgttttc tcgctctgag acccgtgagg tgtatagttt gggtatgacc   1440
52 aacccatact ttaccgtaaa tggcgtctcg caaagcttga gtggctacta tcgtaaaacc   1500
53 aagtatgata acaagaacat tagtaattat gtacttgatt cttatggtgg ctcattaagc   1560
54 tatggatatc caattgatga aaatcaacgc ataagctttg gtctgaatgc tgacaatacc   1620
55 aagcttcatg gcggtcgttt tatgggcatt agtaatgtca agcagctgat ggcagatggt   1680
56 ggcaaaattc aagtggataa taatggcatt cctgatttta agcatgatta cacaacctac   1740
57 aatgccattt tggggtggaa ttattcaagt ctagatcgcc ctgtatttcc aacccaaggc   1800
58 atgagtcatt ctgtagattt gacggttggt tttggtgata aaactcatca aaaagtggtt   1860
59 tatcaaggca atatctatcg cccatttatc aaaaaatcag tcttgcgtgg atacgccaag   1920
60 ttaggctatg gcaataattt accattttat gaaaatttct atgcaggcgg ctatggttcg   1980
```

RAW SEQUENCE LISTING   DATE: 08/30/2001
PATENT APPLICATION: US/09/701,711   TIME: 07:37:03

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\08302001\I701711.raw

```
61 gttcgtggct atgatcaatc ctctttgggt ccacgctcac aagcctattt gacagctcgt   2040
62 cgtggtcaac aaaccacact aggagaggtt gttggtggta atgctttggc aactttcggc   2100
63 agtgagctga ttttaccttt gccatttaaa ggtgattgga tagatcaggt gcgtccagtg   2160
64 atattcattg agggcggtca ggtttttgat acaacaggta tggataaaca aaccattgat   2220
65 ttaacccaat ttaaagaccc acaagcaaca gctgaacaaa atgcaaaagc agccaatcgc   2280
66 ccgctactaa cccaagataa acagttgcgt tatagtgctg gtgttggtgc aacttggtat   2340
67 acgcccattg gtcctttatc tattagctat gccaagccat tgaataaaaa acaaaatgat   2400
68 cagaccgata cggtacagtt ccagattggt agtgtctttt aa                      2442
70 <210> SEQ ID NO: 2
71 <211> LENGTH: 813
72 <212> TYPE: PRT
73 <213> ORGANISM: Moraxella catarrhalis
75 <400> SEQUENCE: 2
76 Met Arg Asn Ser Tyr Phe Lys Gly Phe Gln Val Ser Ala Met Thr Met
77 1               5                   10                  15
78 Ala Val Met Met Val Met Ser Thr His Ala Gln Ala Ala Asp Phe Met
79             20                  25                  30
80 Ala Asn Asp Ile Thr Ile Thr Gly Leu Gln Arg Val Thr Ile Glu Ser
81         35                  40                  45
82 Leu Gln Ser Val Leu Pro Phe Arg Leu Gly Gln Val Val Ser Glu Asn
83     50                  55                  60
84 Gln Leu Ala Asp Gly Val Lys Ala Leu Tyr Ala Thr Gly Asn Phe Ser
85 65                  70                  75                  80
86 Asp Val Gln Val Tyr His Gln Glu Gly Arg Ile Ile Tyr Gln Val Thr
87                 85                  90                  95
88 Glu Arg Pro Leu Ile Ala Glu Ile Asn Phe Glu Gly Asn Arg Leu Ile
89             100                 105                 110
90 Pro Lys Glu Gly Leu Gln Glu Gly Leu Lys Asn Ala Gly Leu Ala Val
91             115                 120                 125
92 Gly Gln Pro Leu Lys Gln Ala Thr Val Gln Met Ile Glu Thr Glu Leu
93     130                 135                 140
94 Thr Asn Gln Tyr Ile Ser Gln Gly Tyr Tyr Asn Thr Glu Ile Thr Val
95 145                 150                 155                 160
96 Lys Gln Thr Met Leu Asp Gly Asn Arg Val Lys Leu Asp Met Thr Phe
97                 165                 170                 175
98 Ala Glu Gly Lys Pro Ala Arg Val Val Asp Ile Asn Ile Ile Gly Asn
99             180                 185                 190
100 Gln His Phe Ser Asp Ala Asp Leu Ile Asp Val Leu Ala Ile Lys Asp
101             195                 200                 205
102 Asn Lys Ile Asn Pro Leu Ser Lys Ala Asp Arg Tyr Thr Gln Glu Lys
103         210                 215                 220
104 Leu Val Thr Ser Leu Glu Asn Leu Arg Ala Lys Tyr Leu Asn Ala Gly
105 225                 230                 235                 240
106 Phe Val Arg Phe Glu Ile Lys Asp Ala Lys Leu Asn Ile Asn Glu Asp
107             245                 250                 255
108 Lys Asn Arg Ile Phe Val Glu Ile Ser Leu His Glu Gly Glu Gln Tyr
109             260                 265                 270
110 Arg Phe Gly Gln Thr Gln Phe Leu Gly Asn Leu Thr Tyr Thr Gln Ala
111             275                 280                 285
```

RAW SEQUENCE LISTING   DATE: 08/30/2001
PATENT APPLICATION: US/09/701,711   TIME: 07:37:03

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\08302001\I701711.raw

```
112 Glu Leu Glu Ala Leu Leu Lys Phe Lys Ala Glu Glu Gly Phe Ser Gln
113     290             295         300
114 Ala Met Leu Glu Gln Thr Thr Asn Asn Ile Ser Thr Lys Phe Gly Asp
115 305             310             315             320
116 Asp Gly Tyr Tyr Tyr Ala Gln Ile Arg Pro Val Thr Arg Ile Asn Asp
117         325             330             335
118 Glu Ser Arg Thr Val Asp Val Glu Tyr Tyr Ile Asp Pro Val His Pro
119         340             345             350
120 Val Tyr Val Arg Arg Ile Asn Phe Thr Gly Asn Phe Lys Thr Gln Asp
121         355             360             365
122 Glu Val Leu Arg Arg Glu Met Arg Gln Leu Glu Gly Ala Leu Ala Ser
123         370             375             380
124 Asn Gln Lys Ile Gln Leu Ser Arg Ala Arg Leu Met Arg Thr Gly Phe
125 385             390             395             400
126 Phe Lys His Val Thr Val Asp Thr Arg Pro Val Pro Asn Ser Pro Asp
127             405             410             415
128 Gln Val Asp Val Asn Phe Val Val Glu Glu Gln Pro Ser Gly Ser Ser
129         420             425             430
130 Thr Ile Ala Ala Gly Tyr Ser Gln Ser Gly Gly Val Thr Phe Gln Phe
131         435             440             445
132 Asp Val Ser Gln Asn Asn Phe Met Gly Thr Gly Lys His Val Asn Ala
133         450             455             460
134 Ser Phe Ser Arg Ser Glu Thr Arg Glu Val Tyr Ser Leu Gly Met Thr
135 465             470             475             480
136 Asn Pro Tyr Phe Thr Val Asn Gly Val Ser Gln Ser Leu Ser Gly Tyr
137             485             490             495
138 Tyr Arg Lys Thr Lys Tyr Asp Asn Lys Asn Ile Ser Asn Tyr Val Leu
139         500             505             510
140 Asp Ser Tyr Gly Gly Ser Leu Ser Tyr Gly Tyr Pro Ile Asp Glu Asn
141         515             520             525
142 Gln Arg Ile Ser Phe Gly Leu Asn Ala Asp Asn Thr Lys Leu His Gly
143         530             535             540
144 Gly Arg Phe Met Gly Ile Ser Asn Val Lys Gln Leu Met Ala Asp Gly
145 545             550             555             560
146 Gly Lys Ile Gln Val Asp Asn Asn Gly Ile Pro Asp Phe Lys His Asp
147             565             570             575
148 Tyr Thr Thr Tyr Asn Ala Ile Leu Gly Trp Asn Tyr Ser Ser Leu Asp
149         580             585             590
150 Arg Pro Val Phe Pro Thr Gln Gly Met Ser His Ser Val Asp Leu Thr
151         595             600             605
152 Val Gly Phe Gly Asp Lys Thr His Gln Lys Val Val Tyr Gln Gly Asn
153         610             615             620
154 Ile Tyr Arg Pro Phe Ile Lys Lys Ser Val Leu Arg Gly Tyr Ala Lys
155 625             630             635             640
156 Leu Gly Tyr Gly Asn Asn Leu Pro Phe Tyr Glu Asn Phe Tyr Ala Gly
157             645             650             655
158 Gly Tyr Gly Ser Val Arg Gly Tyr Asp Gln Ser Ser Leu Gly Pro Arg
159             660             665             670
160 Ser Gln Ala Tyr Leu Thr Ala Arg Arg Gly Gln Gln Thr Thr Leu Gly
```

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\08302001\I701711.raw

```
161            675                   680                   685
162 Glu Val Val Gly Gly Asn Ala Leu Ala Thr Phe Gly Ser Glu Leu Ile
163         690                   695                   700
164 Leu Pro Leu Pro Phe Lys Gly Asp Trp Ile Asp Gln Val Arg Pro Val
165 705                   710                   715                   720
166 Ile Phe Ile Glu Gly Gly Gln Val Phe Asp Thr Thr Gly Met Asp Lys
167                   725                   730                   735
168 Gln Thr Ile Asp Leu Thr Gln Phe Lys Asp Pro Gln Ala Thr Ala Glu
169               740                   745                   750
170 Gln Asn Ala Lys Ala Ala Asn Arg Pro Leu Leu Thr Gln Asp Lys Gln
171             755                   760                   765
172 Leu Arg Tyr Ser Ala Gly Val Gly Ala Thr Trp Tyr Thr Pro Ile Gly
173     770                   775                   780
174 Pro Leu Ser Ile Ser Tyr Ala Lys Pro Leu Asn Lys Lys Gln Asn Asp
175 785                   790                   795                   800
176 Gln Thr Asp Thr Val Gln Phe Gln Ile Gly Ser Val Phe
177                   805                   810
179 <210> SEQ ID NO: 3
180 <211> LENGTH: 2442
181 <212> TYPE: DNA
182 <213> ORGANISM: Moraxella catarrhalis
184 <400> SEQUENCE: 3
185 atgcgtaatt catattttaa aggttttcag gtcagtgcaa tgacaatggc tgtcatgatg      60
186 gtaatgtcaa ctcatgcaca agcggcggat tttatggcaa atgacattac catcacagga     120
187 ctacagcgag tgaccattga aagcttacaa agcgtgctgc cgtttcgctt gggtcaagtg     180
188 gtgagcgaaa accagttggc tgatggtgtc aaagcacttt atgcaacagg caatttttca     240
189 gatgtgcaag tctatcatca agaagggcgt atcatctatc aggtaaccga aaggccgtta     300
190 atcgctgaga ttaattttga gggcaatcgc ttaattccaa aagaaggtct acaagaaggg     360
191 ctaaaaaatg ctggcttagc tgtgggtcaa ccactaaaac aagccacagt acagatgatc     420
192 gaaaccgagc ttaccaatca atatatatca caaggctatt ataataccga aattactgtc     480
193 aaacagacga tgcttgatgg taatcgtgtt aagcttgata tgacctttgc tgaaggtaaa     540
194 cctgcacggg tggttgatat taatatcatt ggcaatcagc attttagcga tgcagatttg     600
195 attgatgtgc ttgcgattaa ggataataaa atcaatccac tgtctaaagc tgaccgttat     660
196 actcaagaaa agctggtgac cagtttagag aatttgcgtg ctaaatatct caatgcaggg     720
197 tttgtgcgtt ttgagattaa agatgctaag cttaatatta atgaagataa aaaccgtatc     780
198 tttgttgaga tttcattgca tgaaggtgag caatatcgct ttggacagac acagtttttg     840
199 ggtaatttaa cttatactca agcagaactt gaggcactgc ttaaattcaa agcagaagaa     900
200 gggttttcac aagccatgct tgagcaaaca acaaacaata tcagtaccaa atttggtgac     960
201 gatggctatt attatgctca aatccgtcct gtaacacgca ttaatgatga aagtcgtacg    1020
202 gttgatgtgg aatattatat tgaccctgta caccctgtct atgtacgccg tattaatttt    1080
203 acaggtaact ttaagaccca agatgaagta ctccgtcgtg agatgcgaca acttgaaggt    1140
204 gcgttggcat ctaatcaaaa aatccagctg tctcgtgcac gcttgatgcg gactgggttt    1200
205 tttaaacatg ttaccgttga tactcgtcca gtacccaact cacctgatca ggttgatgta    1260
206 aattttgtgg ttgaagaaca accttcagga tcatcaacca tcgcagcagg ctactctcaa    1320
207 agtggtggtg taacttttca atttgatgtt tctcaaaata actttatggg tacaggtaag    1380
208 cacgtcaatg cttcgttttc tcgctctgag acccgtgagg tgtatagttt gggtatgacc    1440
209 aacccatact ttaccgtaaa tggcgtctcg caaagcttga gtggctacta tcgtaaaacc    1500
210 aagtatgata acaagaacat tagtaattat gtacttgatt cttatggtgg ctcattaagc    1560
211 tatggatatc caattgatga aaatcaacgc ataagctttg gtctgaatgc tgacaatacc    1620
```

RAW SEQUENCE LISTING   DATE: 08/30/2001
PATENT APPLICATION: US/09/701,711   TIME: 07:37:03

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\08302001\I701711.raw

```
212 aagcttcatg gcggtcgttt tatgggcatt agtaatgtca agcagctgat ggcagatggt   1680
213 ggcaaaattc aagtggataa taatggcatt cctgatttta agcatgatta cacaacctac   1740
214 aatgccattt tggggtggaa ttattcaagt ctagatcgcc ctgtatttcc aacccaaggc   1800
215 atgagtcatt ctgtagattt gacggttggt tttggtgata aaactcatca aaaagtggtt   1860
216 tatcaaggca atatctatcg cccattatc aaaaaatcag tcttgcgtgg atacgccaag   1920
217 ttaggctatg gcaataattt accattttat gaaaatttct atgcaggcgg ctatggttcg   1980
218 gttcgtggct atgatcaatc ctctttgggt ccacgctcac aagcctattt gacagctcgt   2040
219 cgtggtcaac aaaccacact aggagaggtt gttggtggta atgctttggc aactttcggc   2100
220 agtgagctga ttttaccttt gccatttaaa ggtgattgga tagatcaggt gcgtccagtg   2160
221 atattcattg agggcggtca ggttttgat acaacaggta tggataaaca aaccattgat   2220
222 ttaacccaat ttaaagaccc acaagcaaca gctgaacaaa atgcaaaagc agccaatcgc   2280
223 ccgctactaa cccaagataa acagttgcgt tatagtgctg gtgttggtgc aacttggtat   2340
224 acgcccattg gtcctttatc tattagctat gccaagccat tgaataaaaa acaaaatgat   2400
225 cagaccgata cggtacagtt ccagattggt agtgtctttt aa                      2442
227 <210> SEQ ID NO: 4
228 <211> LENGTH: 813
229 <212> TYPE: PRT
230 <213> ORGANISM: Moraxella catarrhalis
232 <400> SEQUENCE: 4
233 Met Arg Asn Ser Tyr Phe Lys Gly Phe Gln Val Ser Ala Met Thr Met
234  1               5                   10                  15
235 Ala Val Met Met Val Met Ser Thr His Ala Gln Ala Ala Asp Phe Met
236             20                  25                  30
237 Ala Asn Asp Ile Thr Ile Thr Gly Leu Gln Arg Val Thr Ile Glu Ser
238             35                  40                  45
239 Leu Gln Ser Val Leu Pro Phe Arg Leu Gly Gln Val Val Ser Glu Asn
240     50                  55                  60
241 Gln Leu Ala Asp Gly Val Lys Ala Leu Tyr Ala Thr Gly Asn Phe Ser
242 65                  70                  75                  80
243 Asp Val Gln Val Tyr His Gln Glu Gly Arg Ile Ile Tyr Gln Val Thr
244             85                  90                  95
245 Glu Arg Pro Leu Ile Ala Glu Ile Asn Phe Glu Gly Asn Arg Leu Ile
246             100                 105                 110
247 Pro Lys Glu Gly Leu Gln Glu Gly Leu Lys Asn Ala Gly Leu Ala Val
248         115                 120                 125
249 Gly Gln Pro Leu Lys Gln Ala Thr Val Gln Met Ile Glu Thr Glu Leu
250     130                 135                 140
251 Thr Asn Gln Tyr Ile Ser Gln Gly Tyr Tyr Asn Thr Glu Ile Thr Val
252 145                 150                 155                 160
253 Lys Gln Thr Met Leu Asp Gly Asn Arg Val Lys Leu Asp Met Thr Phe
254             165                 170                 175
255 Ala Glu Gly Lys Pro Ala Arg Val Val Asp Ile Asn Ile Ile Gly Asn
256             180                 185                 190
257 Gln His Phe Ser Asp Ala Asp Leu Ile Asp Val Leu Ala Ile Lys Asp
258         195                 200                 205
259 Asn Lys Ile Asn Pro Leu Ser Lys Ala Asp Arg Tyr Thr Gln Glu Lys
260     210                 215                 220
261 Leu Val Thr Ser Leu Glu Asn Leu Arg Ala Lys Tyr Leu Asn Ala Gly
262 225                 230                 235                 240
```

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/701,711

DATE: 08/30/2001
TIME: 07:37:05

Input Set : A:\seqlist.txt
Output Set: N:\CRF3\08302001\I701711.raw